EXHIBIT 14

(12) United States Patent Al-Ali et al.

US 8,190,223 B2 (10) Patent No.: May 29, 2012 (45) **Date of Patent:**

(54) NONINVASIVE MULTI-PARAMETER PATIENT MONITOR

(75) Inventors: Ammar Al-Ali, Tustin, CA (US); Joe

Kiani, Laguna Niguel, CA (US); Mohamed Diab, Mission Viejo, CA (US); Greg Olsen, Irvine, CA (US); Roger Wu, Irvine, CA (US); Rick Fishel, Orange, CA (US)

(73) Assignee: Masimo Laboratories, Inc., Irvine, CA

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 1661 days.

Appl. No.: 11/367,033

(22)Filed: Mar. 1, 2006

(65)**Prior Publication Data**

> US 2006/0226992 A1 Oct. 12, 2006

Related U.S. Application Data

- (60) Provisional application No. 60/657,596, filed on Mar. 1, 2005, provisional application No. 60/657,281, filed on Mar. 1, 2005, provisional application No. 60/657,268, filed on Mar. 1, 2005, provisional application No. 60/657,759, filed on Mar. 1, 2005.
- (51) Int. Cl. A61B 5/1455 (2006.01)
- (52) U.S. Cl. 600/310; 600/323; 600/324; 600/326
- Field of Classification Search 600/309-344 See application file for complete search history.

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Primary Examiner — Eric Winakur Assistant Examiner — Marjan Fardanesh (74) Attorney, Agent, or Firm — Knobbe Martens Olson & Bear LLP

(57)ABSTRACT

Embodiments of the present disclosure include a handheld multi-parameter patient monitor capable of determining multiple physiological parameters from the output of a light sensitive detector capable of detecting light attenuated by body tissue. For example, in an embodiment, the monitor is capable of advantageously and accurately displaying one or more of pulse rate, plethysmograph data, perfusion quality, signal confidence, and values of blood constituents in body tissue, including for example, arterial carbon monoxide saturation ("HbCO"), methemoglobin saturation ("HbMet"), total hemoglobin ("Hbt"), arterial oxygen saturation ("SpO2"), fractional arterial oxygen saturation ("SpaO2"), or the like. In an embodiment, the monitor advantageously includes a plurality of display modes enabling more parameter data to be displayed than the available physical display real estate.

47 Claims, 18 Drawing Sheets

